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FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

HICKORY VALLEY-SELMER 161-KV TRANSMISSION LINE TAP TO BOLIVAR SUBSTATION AND SUBSTATION UPGRADES, HARDEMAN COUNTY, TENNESSEE

The Proposed Action

Tennessee Valley Authority (TVA) proposes to construct a 161-kilovolt (kV) transmission line tap from its Hickory Valley-Selmer 161-kV Transmission Line to its Bolivar Substation near Bolivar, Tennessee. The transmission line tap, which would be approximately 5 miles long, would be built using single-pole steel structures on new right-of-way 100 feet in width. Also, TVA proposes to expand the switchyard at the Bolivar Substation by about 120 feet on the eastern side. In order to serve Bolivar Electric Department's planned West Bolivar Substation, TVA proposes to build a 400-foot long "slack span" from the Bolivar Substation to the new substation. Several transmission lines entering the Bolivar Substation would be reconfigured to facilitate their re-termination in new bays. The entire project would affect approximately 66 acres.

TVA would provide metering equipment to Bolivar Electric Department for installation at its new substation. Equipment would be installed at TVA's Systems Operation Center in Chattanooga that would allow monitoring of the new substation. An Environmental Assessment (EA) was prepared for this proposed action and is incorporated by reference.

Background

Power to TVA's Bolivar Substation is supplied by its Hickory Valley-Selmer 161-kV Transmission Line. This line is 64 miles long and has experienced repeated reliability problems. This line currently supplies seven substations. An outage of this line interrupts 75.4 megawatts of load.

Construction of the proposed tap line would create a loop line with breakers in the substation. This would effectively separate the Hickory Valley-Selmer 161-kV Transmission Line into two segments of 45 and 15 miles. This would improve reliability, as each segment could serve the entire load if the other segment were out of service.

Alternatives

Under the No Action Alternative, TVA would not build the proposed line connecting the Hickory Valley-Selmer 161-kV Transmission Line to the Bolivar Substation. TVA would not expand the Bolivar Substation and would not provide a new delivery point to Bolivar Electric Department at its planned substation. Under this alternative, TVA would continue to experience reliability problems on the Hickory Valley-Selmer Transmission Line, and Bolivar Electric Department would not have electric service at its planned substation.

Under the Action Alternative, TVA would construct the proposed transmission line loop to the Bolivar Substation. Adoption of this alternative would increase the reliability of TVA's

transmission system in the Bolivar area and would provide a delivery point to the Bolivar Electric Department.

During the development of the proposed action, TVA considered fourteen alternative routes consisting of sixteen potential route segments for the proposed transmission line. The preferred line route was identified based on a number of factors, including public input, reduction of potential environmental impacts, avoidance or lessening severance of property, and avoidance of cemeteries, schools, and other cultural features. This preferred route is analyzed in detail in the EA.

A third alternative was developed that involved the addition of circuit breakers at the TVA Hickory Valley and South Jackson Substations. Also, TVA would construct approximately 7 miles of transmission line from the Hickory Valley Substation to the Bolivar tap point, as well as rebuild about 16 miles of line between the Toone and South Jackson Substations. Approximately one mile of new line would be added to the structures near the South Jackson Substation. Adoption of this alternative would improve reliability and provide a delivery point. However, the cost of this alternative was estimated to be 2.3 times that of the Action Alternative. This alternative also involved taking critical transmission components out of service during construction. For these reasons, this alternative was considered impractical and was eliminated from further consideration.

Impacts Assessment

The EA concludes that, with the implementation of best management practices (BMPs) and other protective measures described in the appendices to the EA, adherence to Tennessee Department of Environment and Conservation Division of Groundwater Protection regulations, and use of oil containment facilities at the substation, potential effects to groundwater would be minor and insignificant. Impacts to water quality and aquatic life would also be temporary, minor, and insignificant.

Vegetation along the route of the proposed right-of-way and in the immediate area is common. Approximately half of the route would be adjacent to existing road right-of-way. Thus, changes in the local vegetation composition would be insignificant. Loss of local wildlife habitat would similarly be insignificant. No federally listed endangered or threatened species would be affected and impacts to the seven state-listed species known to occur in the area would be minor and insignificant. No effects on natural areas, including the Hatchie State Scenic River and McAnulty's Woods National Natural Landmark, located 2.1 and 1.3 miles, respectively, from the proposed action, are anticipated.

The proposed transmission line right-of-way would cross 6.72 acres of wetlands. Emergent wetlands comprise about 1.6 acres of this total, while about 5.1 acres are forested wetlands. Thus, 5.1 acres of forested wetlands would be converted to emergent wetlands. This acreage is adjacent to an existing road and part of a much larger wetland complex, and the conversion of this 5.1-acre area from forested wetland to emergent wetland would not alter the function of the larger wetland. TVA has secured a Nationwide Permit Number 12 from the Corps of Engineers. Potential effects to wetlands would be minor and insignificant and no compensatory wetland mitigation is required by the Corps permit.

Overhead transmission lines and associated structures are considered to be a repetitive action in the 100-year floodplain. Although floodplains would be crossed by the proposed line, the placement of structures in the floodplain is not expected to increase flood elevation or flow

carrying capacity of the streams being crossed. The proposed activities at the Bolivar Substation would not involve work in a floodplain. Thus, potential effects to floodplains would be insignificant.

No organized recreational facilities would be affected by the proposed action and effects on recreational opportunities would be minor and insignificant. Overall visual impacts would also be insignificant. One previously identified archaeological site, a portion of the Trail of Tears, occurs within the project area and was considered ineligible for listing in the National Register of Historic Places because no intact deposits were identified. No other archaeological sites, or historic structures eligible for listing on the National Register, were identified during site surveys. TVA has concluded that the proposed undertaking would not adversely affect any historic properties that are listed in, or eligible for listing in, the National Register and the Tennessee State Historic Preservation Officer has concurred with this determination. The portion of the Trail of Tears in the project area is part of the Trail of Tears National Historic Trail, a unit of the National Park Service. Because no identifiable remains of the trail occur at this site as well as the presence of an existing transmission line, minimal to no impacts to the National Historic Trail would occur.

Mitigation

The siting process TVA used for the transmission line sought to avoid or limit potential environmental impacts where feasible. Standard measures that TVA routinely implements with all of its transmission line projects, such as the use of BMPs and other practices listed in the appendices of the EA, would also reduce many environmental impacts. These measures include the establishment of streamside management zones to protect against adverse impacts to water quality and aquatic resources. No additional non-routine commitments or mitigation have been identified as necessary.

Conclusion and Findings

Based on the findings in the EA, TVA has concluded that construction and operation of the proposed transmission line and the substation upgrades would not result in significant adverse impacts to the environment. This conclusion takes into account the implementation of the standard commitments and the use of BMPs.

Environmental Stewardship and Policy has determined that the proposed action is not a major federal action significantly affecting the quality of the environment. Accordingly, an Environmental Impact Statement is not required.

Charles P. Nicholson for

November 3, 2006

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Date Signed